## REMARKS

By the above amendment, claims 1-32 have been canceled without prejudice or disclaimer of the subject matter thereof, and includes which stand withdrawn from consideration and which have been canceled without prejudice to the right to file a divisional application directed thereto. New claims 33-42 have been presented, wherein claim 33 is an independent claim and claims 34-42 depend directly or indirectly therefrom. Applicants submit that the newly submitted claims are in compliance with 35 U.S.C. §112, first and second paragraphs, and patentably distinguish over the cited art as will become clear from the following discussion.

With regard to the rejection of claims under 35 U.S.C. §112, first paragraph, and the objection to the specification, applicants note that as recognized by the Examiner, the originally filed specification discloses a heater without Peltier cooling and applicants submit that such disclosure encompasses the recitation of a heater without cooling. However, as will become clear from the following discussion, the claimed features as set forth in independent claim 33 and the dependent claims presented herein are supported by the original disclosure and do not utilize the terminology of "without cooling".

Applicants note that the present invention as described in the objects of the specification is to provide a semiconductor laser module having stable wavelength at low cost and at low power consumption, while miniaturizing the semiconductor laser module. As described, problems have been encountered in reducing the cost of the semiconductor laser module having a stable wavelength and the conventional semiconductor laser modules, as described, have no temperature control or have utilized a temperature control which effects cooling so as to obtain a semiconductor laser module having a stable wavelength. Thus, applicants have determined that a semiconductor laser module having stable wavelength could be obtained at low cost without providing an additional cooler by enabling the semiconductor laser module to

operate at a high temperature which is at least the temperature of the ambient air of the semiconductor laser and maintaining such temperature. For example, as described at page 12, line 1 of the specification of this application in accordance with a first embodiment, the semiconductor laser is operated at a temperature of 84°C ± 1°C, while a second embodiment operates at the same temperature as described at page 16, line 13 of the specification, and a third embodiment operates at a temperature of 69°C ± 1°C as described at page 16, line 13. In accordance with the embodiments as illustrated in Figs. 1, 5 and 7 of the drawings, for example, and as now recited in independent claim 33 and the dependent claims, there is shown a semiconductor laser module including a semiconductor laser 1, a driving circuit 7 for driving the semiconductor laser and a temperature control arrangement including at least a controller 3, a heater 2 and a temperature sensor 6. That is, as described in the specification of this application and as now recited in claim 33, there is provided a heating element 2 for controlling temperature of the semiconductor laser, a temperature sensor 6 for sensing ambient air temperature of the semiconductor laser, and a temperature control module 3 for controlling the heating element on the basis of temperature information from the temperature sensor so as to maintain the semiconductor laser at least at a temperature of the ambient air temperature of the semiconductor laser. More particularly, in accordance with the present invention, heating is effected by the heating element so as to maintain the semiconductor laser at a temperature of at least the ambient air temperature. Applicants submit that such features as recited in claim 33 and the dependent claims are not disclosed or taught in the cited art, as will become clear from the following discussion.

The rejection of claims 1-3 under 35 U.S.C. 102(b) as being anticipated by Kameda (JP 6-97601); the rejection of claims 4-12 and 16-24 under 35 U.S.C. 103(a) as being unpatentable over Hirose (JP 57-54383) in view of Kameda; and the rejection of claim 13 under 35 U.S.C. 103(a) as being unpatentable over Hirose and

Kameda and further in view of Auracher et al; such rejections are considered to be obviated by the cancellation of the aforementioned claims and the presentation of new claims and are traversed insofar as they are applicable to the newly presented claims 33-41. Although applicants consider it unnecessary to point out the differences between the claimed invention and the cited art in light of the features of claims 33-41, applicants offer the following comments.

Turning first to Kameda and the position set forth by the Examiner, applicants note that only an English language abstract has been provided and applicants submit that the Examiner has mischaracterized the disclosure thereof. Applicants submit that Kameda describes in col. 3 [0011], lines 44-46, that all of this element is fixed on a sub mount of SiC and lower surface of SiC is maintained on 25°C by a heatsink. That is, a temperature of the active layer part 1 is maintained at 25°C by use of a cooling element. As described in the abstract, the passive waveguide represented by the DBR region 3 is changed by the heat generated by the metal resistor as a heating element 70 and causes the change of refractive index so that the oscillation wavelength changes. Contrary to changing of oscillation wavelength, the present invention is directed to having a stable wavelength and additionally, the metal resistor is at a position sufficiently distance from an active region 1 of a semiconductor laser so that a temperature rise of the active laser is restrained as is apparent from Fig. 6. Applicants submit that it is apparent that Kameda does not disclose or teach a temperature control means for controlling the temperature of the semiconductor laser including a heating element for controlling temperature of the semiconductor laser, a temperature sensor for sensing ambient air temperature of the semiconductor laser, and a temperature control module for controlling the heating element on the basis of temperature information from the temperature sensor so as to maintain the semiconductor laser at least at a temperature of the ambient air temperature of the semiconductor laser. Furthermore, it is apparent that

Kameda et al fails to disclose or teach controlling the heating element to maintain the semiconductor laser and a temperature higher than the ambient air temperature of the semiconductor laser or the other features as recited in dependent claims 34-41. Thus, applicants submit that claim 33 and the dependent claims patentably distinguish over Kameda in the sense of 35 U.S.C. 102 and 35 U.S.C. 103, and should be considered allowable thereover.

With respect to Hirose (JP 57-54383), as described therein, a thermoelectric element 7 provides heating and cooling of the laser diode 3, and a temperature controlling section 8 controls the magnitude of currents conducted through the thermal electric element 7 so that the temperature of the laser diode 3 reaches a prescribed temperature range on the basis of the temperature sensor 6. Again, there is no disclosure of maintaining a temperature at least of the temperature of the ambient air of the semiconductor laser by controlling said heating element. That is, Hirose requires control of the cooling portion of said thermal electric element 7. As such, applicants submit that the features as recited in independent claim 33 and the dependent claims patentably distinguish over Hirose in the sense of 35 U.S.C. 103 and should be considered allowable thereover, taken alone or in combination with Kameda.

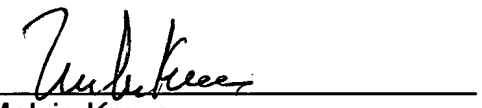
With regard to the dependent claims, applicants note that such claims recite specific structural features which are not disclosed or taught in the cited art. Applicants note, for example, recites the feature that the semiconductor laser is maintained at least at the temperature of the ambient air temperature of said semiconductor laser only by controlling said heating element which, is contrary to the disclosures of Kameda and Hirose. Other features of the dependent claims are also not disclosed or taught by such references. Thus, the dependent claims when considered in conjunction with parent claim 33 further patentably distinguish over Hirose and Kameda taken alone or in any combination thereof.

As to Auracher et al, this reference is cited only for the disclosure of a Fabry-Perot semiconductor laser and as recognized by the Examiner, the combination does not provide the claimed features. Thus, applicants submit that all claims patentably distinguish over this proposed combination of references.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (520.39419X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



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